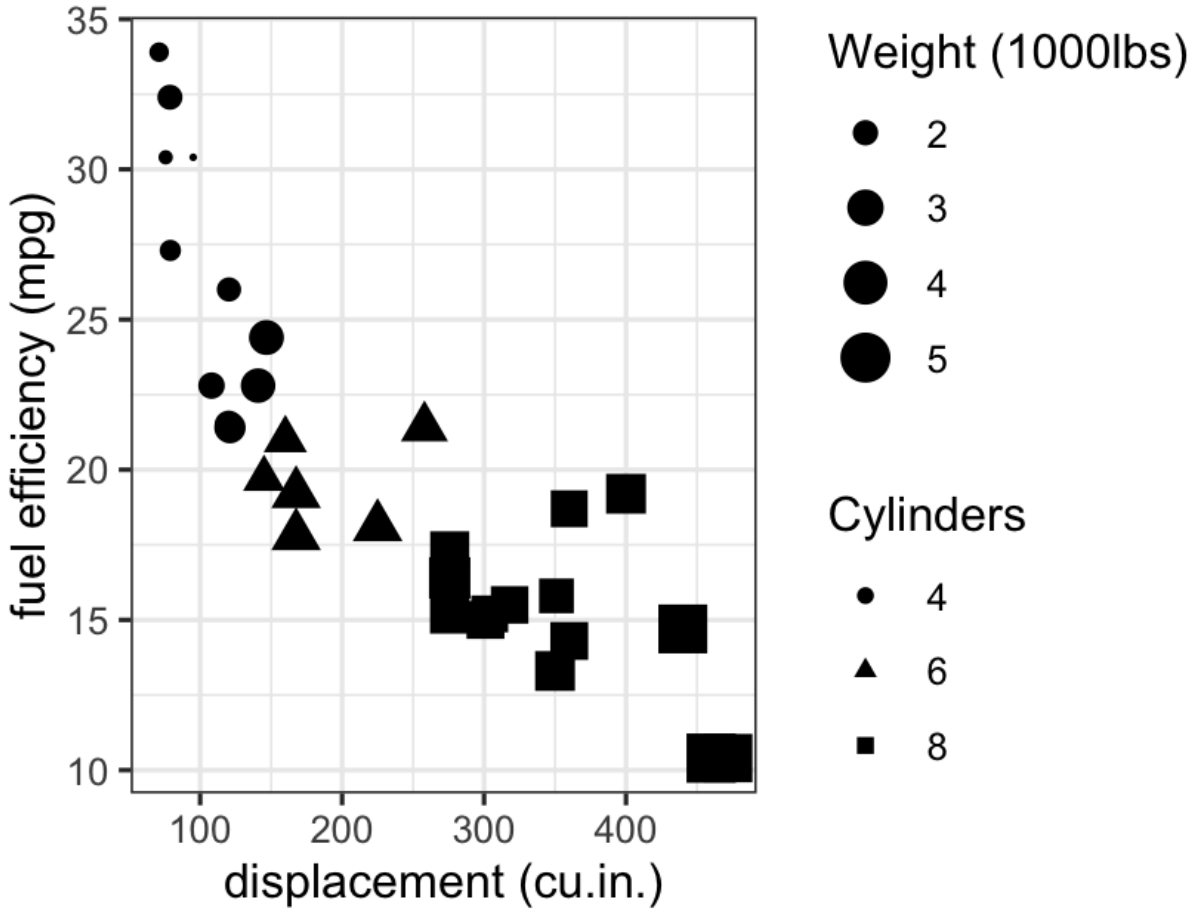
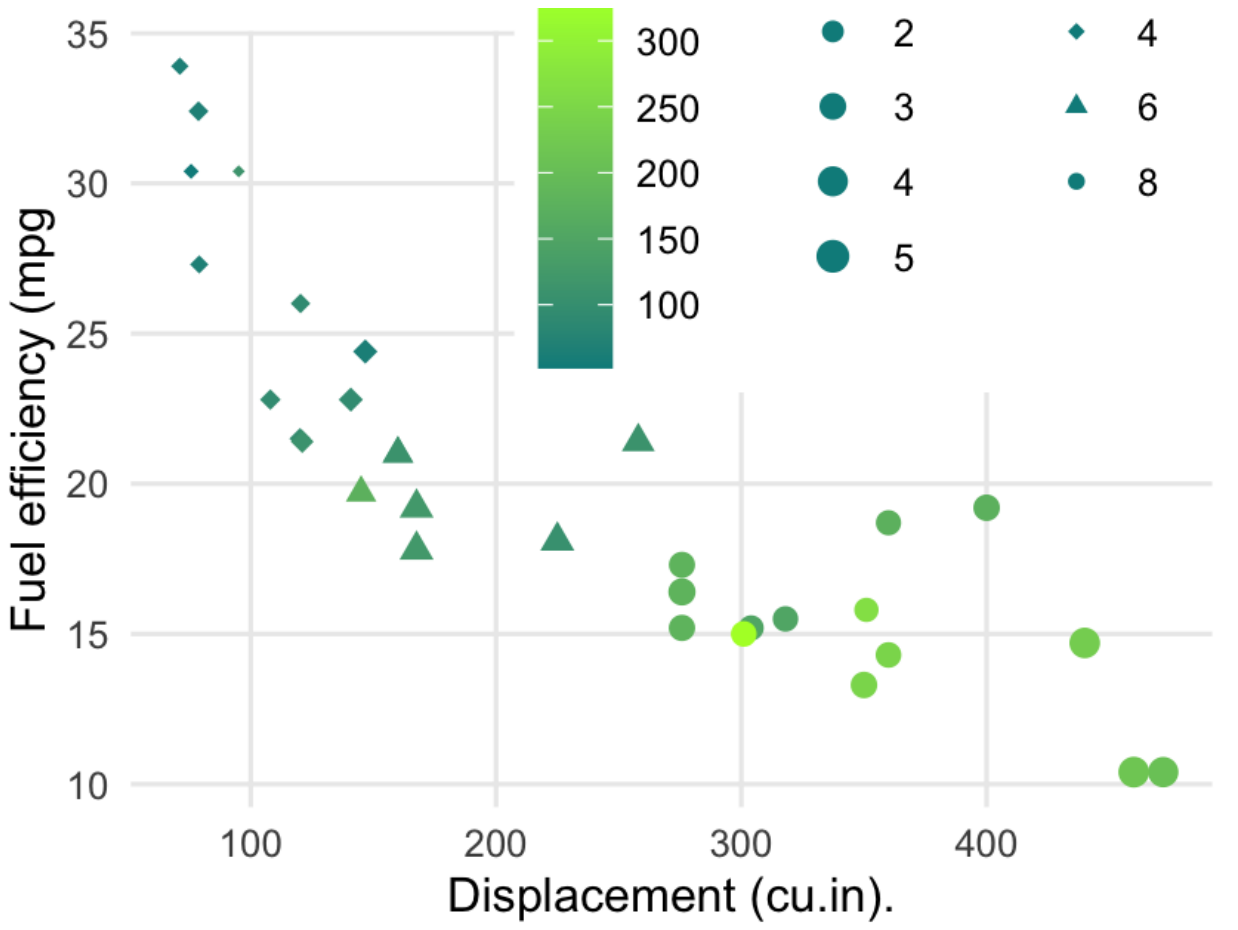
Challenges

```
ggplot(data = mtcars,
            mapping = aes(
                            x = disp,
                            y = mpg,
                            size = wt,
                            shape = as.factor(cyl)
)) + geom_point() +
scale_size_continuous(range = c(0.5,5)) +
guides(size = guide_legend(order = 1, title="Weight (1000lbs)"),
shape = guide_legend(order = 2, title="Cylinders")) +
labs(x="displacement (cu.in))", y="fuel efficiency (mpg)")
```




```
ggplot(data = mtcars,
            mapping = aes(x = disp,
                                          y = mpg,
                                          color = hp,
                                          size= wt,
                                          shape= as.factor(cyl)))
geom_point() +
theme_minimal() +
scale_color_gradient(low="darkcyan", high="greenyellow") +
scale_size_continuous(range = c(1,3)) +
scale_shape_manual(values = c(18,17, 16)) +
```

```
guides(color = guide_colorbar(title="Power",order=1, direction="
            shape = guide_legend(title="Cylinders", order=3, di
override.aes=list(color="darkcyan")),
            size = guide_legend(title="Weight", order=2, directi
override.aes=list(color="darkcyan"))) +
labs(x="Displacement (cu.in).", y="Fuel efficiency (mpg") +
theme(legend.position=c(0.7, 0.85),
legend.box = "horizontal",
legend.box.background = element_rect(fill = "white", #white bacl
linewidth = 0),
panel.border = element_blank(),
panel.grid.minor = element_blank())
```



```
ggplot(data=eoy, aes(x=factor(year), y=score, fill=school)) +
  geom_rain(boxplot.args=list(color="black",
                              outlier.shape=NA),
            cov="school",
            alpha=0.5,
            id.long.var="id") +
  scale_fill_manual(values=c("#0c2577","#840022")) +
  scale_color_manual(values=c("#0c2577","#840022")) +
  theme(legend.justification=c(1, 0), legend.position=c(1, 0)) +
  guides(color="none") +
  labs(x="Testing Year", y="Standardized Score", fill="School")
```